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U. S. Department of Agriculture

## Leeland Farms CHINESE Chestnuts

Seed Nuts
Seedling Trees
Grafted Trees

Leeland Farms

P. O. Box 128

Leesburg, Georgia

## YOUR ASSURANCE OF QUALITY

The Chinese chestnut (Castanea molissima) is the accepted successor to the American chestnut due to its blight resistance, its adaptability to a wide range of soil and climatic conditions, its high productivity, and its large nut size and excellent

eating quality.

Of the several introductions of Chinese chest-nuts from China which were made by the USDA the one designated as the Peter Lui selections have proven far superior to all others. The three new USDA varieties, Nanking, Meiling and Kuling, which were released in January, 1949, originated from these selections. The original seedling trees of these three varieties stand in the orchard from which we obtain all our seed nuts. This orchard has been culled of all species other than C. mollissima; and all trees which were slow coming into production or low in productivity, and those producing nuts of small size have been removed or topworked. As a result, we are able to offer seed nuts and seedling trees of exceptional inheritance—pure Castanea mollissima of the Peter Lui selections with inheritance for high productivity of nuts of good size and above average eating and keeping quality.

Our seedling trees are grown under favorable climatic and soil conditions, and are large for their age, stocky, and have good root systems. Our stock

is State inspected and certified.

Our seed nuts are properly harvested stored to give a high percentage germination. size will vary from medium to extra large and will average approximately 50 per pound. All lots are

hand culled the day shipped.

Our grafted trees are sold as 1 year old tops on three year old roots. We use only seedling rootstocks of pure C. mollissima of the same selections as the scion varieties which gives assurance to our customers of virtual freedom from graft union failures.

TERMS AND CONDITIONS

We ship by Parcel Post or Railway Express, whichever is the cheaper. We do not assume liability for delays in transit, and our liability ends upon delivery in good order to the carrier.

Terms are cash with order, unless to known assumed are districted.

or approved credit rating.

All quotations are made subject to stocks being sold. We assume no liability for failure to fill orders due to injury to nuts or nursery stock from causes beyond our control, and we give no warranty, ex-press or implied, as to description, productiveness, or any other matter, of any nursery stock or seeds we sell.

## GENERAL INFORMATION ON THE CHINESE CHESTNUT

The Chinese chestnut was first introduced into the United States about the turn of the century by the U. S. Department of Agriculture and later introductions have been made by the same agency along with introductions of other Castanea species. Through years of testing the Chinese chestnut has been proven to be blight resistant, vigorous, widely adaptable, and highly productive of nuts of excellent size and eating quality, and generally superior to other Castanea species. Some believe the perior to other Castanea species. Some believe the

nut is even superior of the American chestnut in

eating quality.

The Chinese chestnut is now being throughout much of the United States. It is reported to be doing well from central Florida to the Canadian border and from the east coast to the west coast. It does best on the lighter soil types with good drainage and responds to good care with increased production and nut size. In general, sites suitable for peaches have proven equally desirable for Chinese chestnuts.

When planting seedlings or varieties a minimum of 2 is recommended to assure pollination because

of 3 is recommended to assure pollination because the individual seedling tree or variety is self sterile, while all seedlings and varieties appear to be cross fertile so long as the season of bloom coincides.

The nuts must be harvested at frequent intervals during the ripening season to hold field spoilage to a minimum. For long storage it is desirable to hold the nuts in cold storage in nearly moisture tight containers which still allow some ventilation. We use and recommend this type of storage for our

We use and recommend this type of storage for our seed nuts which permits spring planting of the nuts and a higher yield of trees. Nuts to be used for seed should not be allowed to dry out.

Curing for eating purposes is a drying process accompanied by a change of starch to sugar. This process can be carried out either at room or cold storage temperatures with the best eating quality being attained when the nuts have lost from 15 to 18 percent in weight. The lower the temperature of curing the slower is the process, generally, and the better the eating quality. Coarse mesh bags or unsealed cardboard cartons are good containers for use during the curing process. Excessive drying use during the curing process. Excessive drying destroys the usefulness of the nuts for eating pur-

poses. Although many growers still plant seed nuts in the fall we recommend spring planting as a means of overcoming losses from rodents and other factors during the winter. The Chinese chestnut germinates at much lower temperatures than most seeds and should be planted as early as possible in the spring. The nuts should be planted not over 2 inches deep and may be planted either in rows or beds in well-drained locations. We prefer beds with the nuts planted about 5 inches apart and then covered with about 1 inch of sawdust or other loose mulch as an aid in maintaining more constant soil temperature and moisture conditions. Recommended planting dates vary from about February 1st in the South to about April 1st in

the North. Commercial fertilizers can be used either before planting the nuts or after the young trees are up. or both, provided it is well mixed with the soil if applied before planting. Mixtures such as 5-10-5, 4-8-6, and 6-8-8 are good and may be used at rates of from 1-1½ pounds per 100 square feet of bed. If a sawdust mulch is used the mixtures containing the highest percentages of nitrogen are required. the highest percentages of nitrogen are required and additional nitrogen may be needed as side dressing at about midway of the growing season. While the chestnut is resistant to drought injury, irrigation during periods of drought will be beneficial while the trees are small.

The young seedling trees in the nursery planting may be ready to set in the orchard at the end of the first, second or third years depending upon

the length of growing season and care given them. In general, the more vigorous 1 year old tree is the best selection for orchard planting as a seedling, while the grafted tree should have a 1 year old top on a root system not over 3 years old.

The site for the orchard should be well drained and have good soil fertility. Planting distances vary from a 25x25 foot spacing to a 50x50 foot spacing. Some growers prefer a 25x50 or even a 30x60 foot spacing. With all the closer spacing acre yields will build up most rapidly but thinning of the stand of trees will be necessary at from 10 to 20 years of age, depending upon the growth of the trees.

Chinese chestnut seedling trees of the best strains, if well grown, will come into bearing on the average about five years from the planting of the nuts. Many grafted trees will bloom in the nursery row the same year the graft is made.

Care of the Chinese chestnut orchard should follow generally recommended orchard practices in the locality. These will vary from South to North and from the Atlantic Coast inland to the mountainous regions and to the Plains States of the Midwest. Use of adequate amounts of commercial fertilizers and green manure crops together with cultivation in sufficient amounts to keep competition for food materials and moisture at a minimum, is generally advisable.

The young trees are best trained to a single trunk with the lowest branches at a sufficient height to permit all necessary operations under them. Little or no pruning is required after the first three or four years when the tree is being trained.

Harvesting is accomplished by picking up the nuts after they have dropped naturally. Exposure to heat and drying, if left too long on the ground after dropping, quickly causes spoilage which unfits them for eating. In some northern areas control of the chestnut weevil by a hot water treatment is advisable after the nuts are gathered. In orchards of commercial size the cold storage of nuts immediately after gathering permits marketing over a longer period. Mechanical aids to harvesting are being developed but are not yet generally available so that most of the work must still be done by hand.

The harvest period for any one seedling tree or variety will seldom extend over more than a ten day period. However, a number of seedling trees or two or more varieties may increase the over all harvest period to four or five weeks.

The relative merit of seedling and grafted trees for orchard planting is not yet decided. It is a fact that no horticultural crop has made much progress until superior varieties have been made available. Several good varieties of the Chinese chestnut are being propagated now but the planting of seedlings still continues due to too high a percentage of graft union failures in the past. However, experimental work has shown that good graft unions can be obtained if seedling root stocks of the same strains as the varieties being propagated are used. Thus, variety plantings can now be made with good assurance of success provided the varieties are propagated on the proper root stocks. Few nurseries can now supply such trees but their numbers will increase as time passes.